

**HOMONEURA PATELLIFORMIS (BECKER, 1895) AND
H. THALHAMMERI PAPP, 1979, THE ACTUAL SPECIES
COMPRISING THE LAUXANIID TAXA HITHERTO KNOWN
IN BRITAIN AS H. CONSOBRINA (ZETTERSTEDT, 1847)**

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A wildlife survey carried out in Coventry during 1991 has produced many surprises within the Diptera, one of these being the particularly large number of sites obtained for the nationally scarce *Homoneura consobrina*. Whilst sorting this material, careful reference was made to papers by Papp (1979a,b) and Remm & Elberg (1979), which furnish descriptive accounts and/or critically important genitalia diagrams, both of which are conspicuously lacking in the British literature, notably Collin (1948). The European lauxaniid fauna is considerably larger than ours, with many extra species that are only confidently separable on genitalia characters. It became apparent that the '*consobrina*' material contained good series of males with two entirely different genitalia types, each from several sites. Reference to the genitalia figures in Papp (1979b) quickly provided a clue to their identity. One series corresponded exactly to *H. thalhammeri* (Fig. 1), the other equally well to *H. patelliformis* (Fig. 2). It is fortunate that the male genitalia of these *Homoneura* species are large (approximately half the length of the abdomen) and exhibit many useful characters externally without the need for full dissection. Reference to the key in Papp (1979b) and the type description of *H. thalhammeri* in his 1978 paper confirmed these identifications. According to Papp's key, the true *H. consobrina* has a dorsocentral configuration consisting of one pair of presuturals and two pairs of postsuturals. Both *H. thalhammeri* and *H. patelliformis* have all three pairs of dorsocentrals placed behind the suture as does all other British '*consobrina*' material I have seen. It would thus appear that the concept of *H. consobrina* used by Collin (1948) was not the same as that of European workers, but rather one or both of the species dealt with here. *H. consobrina* is thus best struck off the British list.

Within Papp's 1979(b) key, all three species combine to form an easily recognized group of rather small, completely clear-winged species normally with six rows of equal-length acrostichals. It should be stated at this point that the recently described *H. hospes* Allen (1989) does not appear to belong to this group, though it too has clear wings and a pair of presutural dorsocentrals like *H. consobrina* (but three rather than two postsutural ones and a different acrostichal arrangement). Additional means of separating *H. patelliformis* and *H. thalhammeri* can be found in the shape of the head capsule. In the former species, the face and frons are comparatively broad, the dark occipital mark above the neck usually slightly wider, and the jowls wider (about a third of the eye height), producing a 'taller' head profile (Fig. 4). The jowls of *H. thalhammeri* are about one-fifth of the eye height (Fig. 3). In Coventry material of *H. patelliformis* the hind femur usually has two to four clearly differentiated (though not especially strong) anteroventral bristles at the tip, these typically being represented by undifferentiated short hairs in *H. thalhammeri*, though reliability of this character has been queried in non-Coventry specimens (A. E. Stubbs, pers. comm.). The head characters seem to work equally well in both sexes. Unfortunately, like so many lauxaniids, the head capsule has a frequent habit of collapsing during drying, so exposing the genitalia of male specimens during pinning is strongly recommended.

Outside of Europe, related species include *H. patella* and *H. spinidorsum* both described and figured by Shewell (1971) from Mongolia, and an undescribed

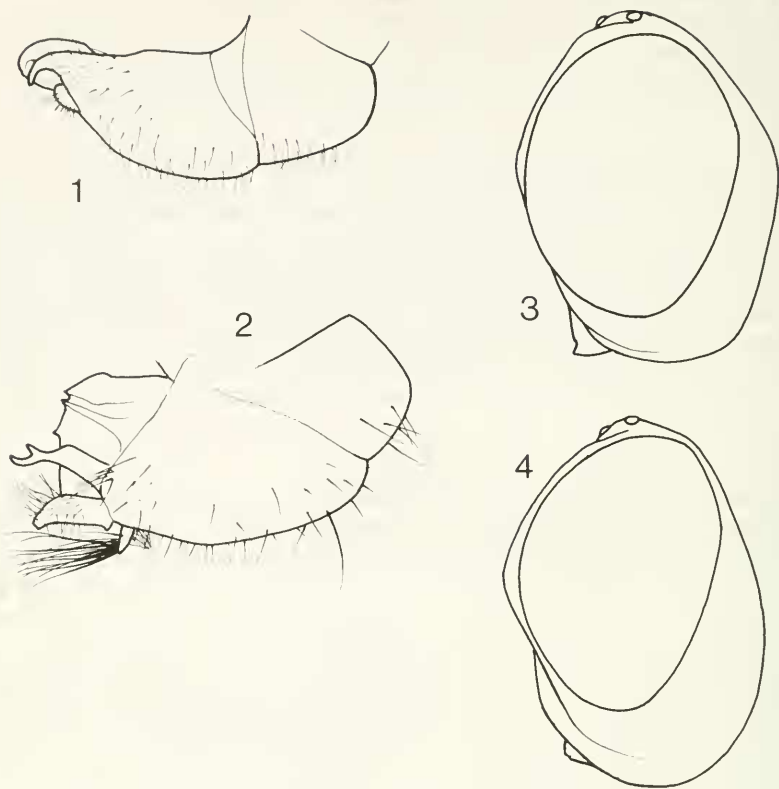


Fig. 1. Male genitalia of *Homoneura thalhammeri*. Fig. 2. Male genitalia of *H. patelliformis*. Fig. 3. Head profile of *H. thalhammeri*. Fig. 4. Head profile of *H. patelliformis*.

species near *patella* from Israel (Freidberg & Yarom, 1990). *H. patella*, which was considered conspecific with *H. patelliformis* by Remm & Elberg (1980), varies in details of the male genitalia. It lacks the bifurcate hypandrial appendage and has much larger cerci. The jowls are wider, about two-fifths the eye height. *H. spinidorsum* has genitalia resembling *H. thalhammeri* but with obviously larger cerci and aedeagus. It also has fairly narrow jowls (one-quarter of the eye height) but only four rows of acrostichals.

These flies are most frequently encountered by sweeping scrub, isolated shrubs, trees and adjacent tall herbage or coarse grasses, and with practice can be distinguished from other orange-bodied lauxaniids by a combination of colour, size and shape. In my experience, a particular fondness is shown for *Salix* species, especially willows, though one Coventry record of *H. patelliformis* was from beneath an isolated weeping willow *Salix babylonica* L. and I have taken both species away from willow. Both species will utilize dry and marshy locations and are clearly not confined to either high quality or older habitat. I am unable to detect any obvious differences in their

habitat requirements, and they were recorded together at five Coventry sites which suggests that their ecology is probably very similar. Mr D. Smith (pers. comm.) informs me that he has found *H. patelliformis* around garden compost heaps and in numbers on the flowers of balm *Melissa officinalis* L.

Abroad, *H. patelliformis* is recorded from Austria, 'Czechoslovakia', Hungary, 'Yugoslavia', Bulgaria, Italy, Southern 'European Russia' (all Papp, 1984a), Rumania (Papp, 1984b), Israel (Friedberg & Yarom, 1990) and Mongolia (Shewell, 1971). *H. thalhammeri* is relatively poorly known, with records apparently restricted to 'Czechoslovakia', Hungary and Rumania (Papp, 1984a).

Locality data (S. J. Falk records unless stated)

H. thalhammeri. W. Cornw.: Beagle Bay (SW7616) 16.vi.77 (vegetation near rocky shore), A. Irwin (specimen in Norwich Museum, det. S.J.F.). N. Devon: Braunton Burrows NNR (SS4534) 20.vi.87 (large calcareous dune system with scrub). Berks.: Thatcham 15.vii.70 (valley fen and canalside), A. E. Stubbs. Cambs.: Kirtling 16.vi.21, 14.vi.25, J. E. Collin (specimens in Oxford Univ. Museum, det. J. W. Ismay). Oxon.: Apsley Rd, Oxford, 4.viii.77, G. C. Varley (specimens in Oxford Univ. Museum, det. J. W. Ismay). W. Norf.: Brancaster 'Marsh Side' (TF7744) 8.vii.93 (swept from shrubs beside saltmarsh). Hunts.: Fenstanton, Brampton, J. Cole (post-1970). Warks. (all but Sutton Park within Coventry City boundary): Herald Way Marsh (SP3776) 10.vii.90, 12.viii.91 (urban derelict grassland, tall herb, scrub and marsh); R. Sowe, Willenhall (SP354762) 27.vii.91 (numerous on riverside sallow); Baginton Fields (SP358758) 21.vii.91 (grassland, tall herb and scrub); Eastern Green Brook (SP275797-307795) 3.ix.91 (streamside scrub, tall herb and grassland); Keresley (SP320839) 26.vi.93 (sycamore and hawthorn scrub); Lower Stoke (SP348784) 17.viii.93 (common on sallows along disused railway line); Almond Tree Avenue Pond (SP358828) 17.vii.91 (common on pondside scrub); Stoneywood Road Pond (SP377818) 9.viii.91 (common on pondside sallow); Hearsall Common (SP311785) 10.vii.91 (swept from scrub); Sutton Park (SP0995), J. Cole (post-1970). N. W. Yorks.: Malham Tarn (SD8966) 26.viii.84 (swept off sycamore tree), A. Irwin (specimen in Norwich Museum, det. L. Papp). Pembs.: Skokholm vii.1934, F. W. Edwards; vi.1950, K. G. V. Smith (both in BM(NH)—det. N. Wyatt).

H. patelliformis. W. Kent: Bromley 12.vi.71 (in garden), P. J. Chandler; Blackheath and Charlton vi-vii.1962, A. A. Allen; Darenth Wood (TQ5772) 27.v.87 (in ancient woodland), A. Godfrey. Bucks.: Aston Rowant NNR, 15.vi.90, P. J. Chandler. Berks.: Maidenhead, in "Insectocutor" tray of Western Research Laboratories, 6.vi.92, P. J. Chandler. S. Essex (all D. Smith): Harold Hill (TQ5392) 20.vii.79 (water trap in garden); Dagnam Park vii-ix.1976-80 (inc. swept from pond); Laindon (TQ6888) vii-viii.1979; Basildon (TQ7489) 8.v-ix.ix.88 (malaise trap). Herts.: Potters Bar 27.vii.64, J. Deeming (in BM(NH)—det. N. Wyatt). Hunts.: Warboys, J. Cole (post-1970). Northants.: Ferry Meadows, Peterborough (TL52984) 6.vii.86. Warks. (all within Coventry City Boundary): Herald Way Marsh 10.vii.90; Whitley Common North (SP343775) i.vii.91 (common on sallow scrub); Eastern Green Brook (as per *H. thalhammeri*); Baginton Fields (as per *H. thalhammeri*); R. Sherbourne, Charterhouse (SP345780) 12.vi.91 (riverside tall herb and scrub); Newfield House (SP334805) 10.vii.91 (scrub and tall herb); Banner Lane Fields (SP277785) 2.vii.91 (swept from hedgerow); Wyken Croft Park (SP377807) 15.viii.91 (riverside scrub); Keresley (SP320839) 24.vi.93 (industrial derelict ground with scrub); Craven Colliery (SP373814) 8.viii.91 (scrub and tall herb); Hearsall Common (as per *H. thalhammeri*); R. Sowe, near Henley Farm (SP366810) (swept from beneath a weeping willow).

ACKNOWLEDGEMENTS

I am very grateful to A. A. Allen, P. J. Chandler, J. Cole, A. Godfrey, A. Irwin, J. Ismay, D. Smith, A. E. Stubbs and N. Wyatt for responding to my requests for site-related data on these species. Additional thanks are due to A. Godfrey for providing me with copies of much of the foreign literature necessary for this work and for checking the manuscript.

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LETTER TO THE EDITOR

Habitat management for invertebrates.—We were pleased to see the review of the handbook *Habitat management for invertebrates* that you have written for the *British Journal of Entomology and Natural History* (1993; **6**: 93). This handbook has been very well received and we were delighted that you have reviewed it so favourably.

However, we are concerned at the suggestion that chapters should be photocopied for attaching to reports, as this constitutes a breach of copyright. The handbook was published by ourselves, and produced jointly with Joint Nature Conservation Committee. They hold the copyright, and anyone wishing to reproduce parts of the book should contact them for permission at Monkstone House, City Road, Peterborough PE1 1JY.

The book has been deliberately priced as low as possible, and is available at £11.50 (inc. p. & p.) from RSPB, The Lodge, Sandy, Beds. SG19 2DL. Profits from sales will go to invertebrate conservation.—Sarah Niemann, Advisory Officer, RSPB, Sandy, Bedfordshire.